RAID Class
Spinpoint F1 RE

Capacity		250GB	320GB	500GB	640GB	750GB	1TB
Model	16MB	HE252HJ	HE322HJ	HE502IJ	HE642JJ		
	32MB					HE753LJ	HE103UJ

FEATURES

- MAX.334GB Formatted Capacity Per Disk
- Serial ATA 3.0Gbps Interface Support
- Improved recording stability over temperature with PMR
- Advanced dynamic FOD control for best data integrity
- Intelligent compensation of external disturbance
- SATA Native Command Queuing Feature
- Device Initiated SATA Power Management
- Rotational vibration sensor
- Staggerd Spin-up Support
- Environment friendly product with RoHS compliance
- Improved performance with dual-ARM based firmware
- ATA S.M.A.R.T. Compliant
- ATA Automatic Acoustic Management Feature
- ATA 48-bit Address Feature
- ATA Device Configur • SilentSeek™
- NoiseGuard™

DRIVE CONFIGURATION

Interface	Serial ATA 3.0Gbps
Buffer DRAM Size[2]	16 / 32 MB
Byte per Sector	512 bytes
Rotational Speed	7,200 RPM

PERFORMANCE SPECIFICATIONS

Average Seek time (typical)		8.9 ms
Average Latency		4.17 ms
Data Transfer Rate		
Media to/from Buffer (Max.)		175 MB/sec
Buffer to/from Host (Max.)		300 MB/sec
Drive Ready Time (typical)	160~320GB	8 sec
	500~1000GB	12 sec

RELIABILITY SPECIFICATIONS

Non-recoverable Read Error	1 sector in 10^{15}bits
Start/Stop Cycles	50,000
MTBF	1.2M

ACOUSTICS[3]

Idle	160~320GB	2.45 Bel
	500-1000GB	2.70 Bel
Performance Seek	250/320GE	2.80 Bel
	500-1000G	2.90 Bel

POWER REQUIREMENTS

Voltage	+5V±5%, +12V±10%		
Capacity[1]	160GB 250GB 320GB	500GB 650GB	750GB 1000GB
Spin-up Current (Max	2.0A	2.3A	2.4A
Seek (typical)[4]	5.7W	6.9W	7.6W
Read/Write (typical)	6.1W	7.4W	8.4W
Idle (typical)	4.4W	5.7W	6.7W
Standby (typical)	1W	1W	1W
Sleep (typical)	1W	1W	1W

ENVIRONMENTAL SPECIFICATIONS

Temperature		
Operating		0 ~ 60 °C
Non-operating		-40 ~ 70 °C
Humidity (non-condensing)		
Operating		5 ~ 90 %
Non-operating		5 ~ 95 %
Linear Shock (1/2 sine pulse)		
Operating		70G
Non-operating	160~320GB	350 G
	500~1000GB	300 G
Altitude (relative to sea level)		
Operating		-300 to 3,000 m
Non-operating		-300 to 12,000 m

PHYSICAL DIMENSION

Height (Max.)		26.1 mm
Width		101.5 mm
Length		147.0 mm
Weight (avg.)	160~320GB	470 g
	500/640GB	610 g
	750/1000GB	650 g

* Note : Design and specifications are subject to change without prior noti

1.1MB = 1,000,000 Bytes, 1GB=1,000,000,000 Bytes

2.A small portion of the 8/16/32MB buffer memory is reserved for firmware use

3 Average value with a high performance cover.

4 Random seek with 30% duty cycle.(Average value)

5.Power consumption values are with/without slumber mode.(Average val